

What is claimed is:

1 *sub 1* 1. A method of selecting a resource for a work item,
2 comprising;
3 determining available resources that possess skills needed by
4 the work item;
5 for each of the determined resources, determining a business
6 value of having the resource service the work item;
7 for each of the determined resources, determining a value to
8 the resource of servicing the work item; and
9 selecting a determined resource that has a best combined
10 value of the business value and the value to the resource, to serve the
11 work item.

1 2. The method of claim 1 wherein:
2 determining a business value comprises
3 determining the business value weighted by a business value
4 weight corresponding to the work item;
5 determining a value to the resource comprises
6 determining the value to the resource weighted by a resource
7 value weight corresponding to the work item; and
8 selecting comprises
9 selecting a determined resource that has a best combined
10 value of the weighted business value and the weighted value to the
11 resource.

1 3. The method of claim 2 wherein:
2 determining a business value comprises
3 determining a weighted business value as a product of (a) the
4 business value weight corresponding to the work item and (b) a sum of
5 products of a level of each said needed skill of the resource and a weight

6 of said needed skill of the work item; and
7 determining a value to the resource comprises
8 determining a weighted resource treatment value as a product
9 of (c) a resource treatment weight corresponding to the work item and (d)
10 a sum of products of each treatment of the resource and a weight of said
11 treatment of the resource.

1 4. The method of claim 3 wherein:
2 the sums of products are scaled sums, and
3 the treatments are scaled treatments.

1 5. The method of claim 4 wherein:
2 selecting comprises
3 selecting the determined resource that has a highest sum of the
4 weighted business value and the weighted resource treatment value.

1 6. The method of claim 3 wherein:
2 the resource treatments of a resource comprise a time since
3 the resource became available and a time that the resource has not spent
4 serving work items.

1 7. The method of claim 6 wherein:
2 the treatments of the resource further comprise a measure of
3 an effect that serving of the work item would have on a goal of the
4 resource.

1 8. The method of claim 7 wherein:
2 the measure of the effect comprises a difference between (a) a
3 distance of an actual allocation of worktime of the resource among skills
4 from a goal allocation of the worktime of the resource among the skills and
5 (b) a distance of an estimated allocation of the worktime of the resource

1 **9. A method of selecting a resource for a work item,**
2 **comprising:**

5 for each of the determined resources, determining a business
6 value comprising a sum across all skills of a product of a skill level of the
7 resource in the skill and a skill weight of the work item for the skill;

12 selecting a determined resource that has a best combined
13 score of its business value and its resource treatment value, to serve the
14 work item

2 the resource treatments of a resource comprise a time since
3 the resource became available, a time that the resource has spent not
4 serving work items, and a measure of an effect that serving the work item
5 would have on a goal of the resource.

2 determining a business value comprises
3 determining a scaled business value comprising the business
4 value scaled by a first scaling factor that is common to all of the
5 determined resources;

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8 resource comprising the value of the resource for that resource treatment
9 scaled by a scaling factor that is common for that resource treatment to all
10 of the determined resources, and

11 determining a scaled resource treatment value comprising a
12 sum, scaled by a second scaling factor that is common to all of the
13 determined resources, across all resource treatments of a product of the
14 scaled value of the resource for the resource treatment and a weight of
15 the work item for the resource treatment; and

16 selecting comprises

17 selecting a determined resource that has a best sum of its
18 scaled business value and its scaled resource treatment value to serve
19 the work item.

1 12. The method of claim 11 wherein:

2 each scaling factor comprises a fraction having in its
3 denominator a maximum value of the value to which said scaling factor
4 applies of any of the resources.

1 *Pub B3* 13. A method of selecting a work item for a resource,
2 comprising:

3 determining available work items that need skills possessed by
4 the resource;

5 for each of the determined work items, determining a business
6 value of having the resource service the work item;

7 for each of the determined work items, determining a value to
8 the work item of being serviced by the resource; and

9 selecting a determined work item that has a best combined
10 value of the business value and the value to the work item to be served by
11 the resource.

1 14. The method of claim 13 wherein:

2 determining business value comprises
3 determining the business value weighted by a business value
4 weight corresponding to the work item;
5 determining a value to the work item comprises
6 determining the value to the work item weighted by a work item
7 value weight corresponding to the work item; and
8 selecting comprises
9 selecting a determined work item that has a best combined
10 value of the weighted business value and the weighted value to the work
11 item.

1 15. The method of claim 14 wherein:
2 determining a business value comprises
3 determining a weighted business value as a product of (a) the
4 business value weight corresponding to the work item and (b) a sum of
5 products of a level of each said needed skill of the resource and a weight
6 of said needed skill of the work item; and
7 determining a value to the work item comprises
8 determining a weighted work item treatment value as a product
9 of (c) a work item treatment weight corresponding to the work item and (d)
10 a sum of products of each treatment of the work item and a weight of said
11 treatment of the work item.

1 16. The method of claim 15 wherein:
2 the sums of products are scaled sums, and
3 the treatments are scaled treatments.

1 17. The method of claim 16 wherein:
2 selecting comprises
3 selecting the determined work item that has a highest sum of
4 the weighted business value and the weighted work item treatment value.

1 18. The method of claim 15 wherein:
2 the work item treatments of a work item comprise a time that
3 the work item has been waiting for service and an estimated time that the
4 work item will have to wait for service.

1 19. The method of claim 18 wherein:
2 the treatments of a work item further comprise a time by which
3 the work item has exceeded its target wait time.

1 20. The method of claim 18 wherein:
2 the estimated wait time that the work item will have to wait for
3 service comprises a product of (a) a ratio of a total number of work items
4 waiting for service and an average number of work items waiting for
5 service and (b) a sum of average wait times of individual said needed
6 skills each weighted by a ratio of the weight of said individual skill and a
7 sum of the weights of the needed skills.

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1 21. A method of selecting a work item for a resource,
2 comprising:
3 determining available work items that need skills possessed by
4 the resource;
5 for each of the determined work items, determining a business
6 value comprising a sum across all skills of a product of a skill level of the
7 resource in the skill and a skill weight of the work item for the skill;
8 for each of the determined work items, determining a work item
9 treatment value comprising a sum across all work item treatments of a
10 product of the value of the work item for the work item treatment and a
11 weight of the work item for the work item treatment; and
12 selecting a determined work item that has a best combined
13 score of its business value and work item treatment value, to be served by
14 the resource.

1 22. The method of claim 21 wherein:
2 the work item treatments of a work item comprise a time that
3 the work item has spent waiting to be serviced, an estimated time that the
4 item will spend waiting to be serviced, and a time by which the work item
5 has exceeded its target waiting time.

1 23. The method of claim 21 wherein:
2 determining a business value comprises
3 determining a scaled business value comprising the business
4 value scaled by a first scaling factor that is common to all of the
5 determined work items;
6 determining a work item treatment value comprises
7 for each work item treatment, determining a scaled value of the
8 work item comprising the value of the work item for that work item
9 treatment scaled by a scaling factor that is common for that work item
10 treatment to all of the determined work items, and
11 determining a scaled work item treatment value comprising a
12 sum, scaled by a second scaling factor that is common to all of the
13 determined work items, across all work item treatments of a product of the
14 scaled value of the work item for the work item treatment and a weight of
15 the work item for the work item treatment; and
16 selecting comprises
17 selecting a determined work item that has a best sum of its
18 scaled business value and its scaled work item treatment value, to be
19 served by the resource.

1 24. The method of claim 23 wherein:
2 each scaling factor comprises a fraction having in its
3 denominator a maximum value of the value to which said scaling factor
4 applies of any of the work items.

1 26. A computer-readable medium containing instructions
2 which, when executed in a computer, cause the computer to perform the
3 method of any one of claims 1-24.

add 1

\mathbb{R}^n is a vector space over \mathbb{R} with the standard inner product. Let \mathcal{B} be a basis for \mathbb{R}^n . Then the matrix M representing the linear transformation T with respect to \mathcal{B} is given by